

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
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Application Serial Number: 10/595,858
Source: IFWO
Date Processed by STIC: 06/02/2006

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IFWO

RAW SEQUENCE LISTING

DATE: 06/02/2006

PATENT APPLICATION: US/10/595,858

TIME: 09:22:00

Input Set : A:\Sequence Listing to File.TXT

Output Set: N:\CRF4\06022006\J595858.raw

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3 <110> APPLICANT: YOSHINAGA, Takashi
4   ARAI, Toru
6 <120> TITLE OF INVENTION: hERG channel-expressing cell
8 <130> FILE REFERENCE: 09857/0204372-USO
10 <140> CURRENT APPLICATION NUMBER: 10/595,858
11 <141> CURRENT FILING DATE: 2006-05-16
13 <150> PRIOR APPLICATION NUMBER: PCT/JP2004/017441
14 <151> PRIOR FILING DATE: 2004-11-17
16 <150> PRIOR APPLICATION NUMBER: JP 2003-387255
17 <151> PRIOR FILING DATE: 2003-11-17
19 <160> NUMBER OF SEQ ID NOS: 13
21 <170> SOFTWARE: PatentIn version 3.3
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 4070
25 <212> TYPE: DNA
26 <213> ORGANISM: Homo Sapiens
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (184)..(3660)
33 <400> SEQUENCE: 1
34 acgcggcctg ctcaggcctc cagcggcccg tccgagggga ggcgggaggc gagcgaggac      60
36 ccgcgcccgc agtccagtct gtgcgcgcc gtgctcgctt ggcgcggtgc gggaccagcg      120
38 ccggccaccc gaagcctagt gcgtcgcccg gtgggtgggc ccgcccggcg ccatgggctc      180
40 agg atg ccg gtg cgg agg ggc cac gtc gcg ccg cag aac acc ttc ctg      228
41   Met Pro Val Arg Arg Gly His Val Ala Pro Gln Asn Thr Phe Leu
42   1          5          10         15
44 gac acc atc atc cgc aag ttt gag ggc cag agc cgt aag ttc atc atc      276
45 Asp Thr Ile Ile Arg Lys Phe Glu Gly Gln Ser Arg Lys Phe Ile Ile
46          20          25          30
48 gcc aac gct cgg gtg gag aac tgc gcc gtc atc tac tgc aac gac ggc      324
49 Ala Asn Ala Arg Val Glu Asn Cys Ala Val Ile Tyr Cys Asn Asp Gly
50          35          40          45
52 ttc tgc gag ctg tgc ggc tac tcg cgg gcc gag gtg atg cag cga ccc      372
53 Phe Cys Glu Leu Cys Gly Tyr Ser Arg Ala Glu Val Met Gln Arg Pro
54          50          55          60
56 tgc acc tgc gac ttc ctg cac ggg ccg cgc acg cag cgc cgc gct gcc      420
57 Cys Thr Cys Asp Phe Leu His Gly Pro Arg Thr Gln Arg Arg Ala Ala
58          65          70          75
60 gcg cag atc gcg cag gca ctg ctg ggc gcc gag gag cgc aaa gtg gaa      468
61 Ala Gln Ile Ala Gln Ala Leu Leu Gly Ala Glu Glu Arg Lys Val Glu
62 80          85          90          95
64 atc gcc ttc tac cgg aaa gat ggg agc tgc ttc cta tgt ctg gtg gat      516
65 Ile Ala Phe Tyr Arg Lys Asp Gly Ser Cys Phe Leu Cys Leu Val Asp

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| | | | | |
|-----|---|------|-----|--|
| 66 | 100 | 105 | 110 | |
| 68 | gtg gtg ccc gtg aag aac gag gat ggg gct gtc atc atg ttc atc ctc | 564 | | |
| 69 | Val Val Pro Val Lys Asn Glu Asp Gly Ala Val Ile Met Phe Ile Leu | | | |
| 70 | 115 120 125 | | | |
| 72 | aat ttc gag gtg gtg atg gag aag gac atg gtg ggg tcc ccg gct cat | 612 | | |
| 73 | Asn Phe Glu Val Val Met Glu Lys Asp Met Val Gly Ser Pro Ala His | | | |
| 74 | 130 135 140 | | | |
| 76 | gac acc aac cac cgg ggc ccc ccc acc agc tgg ctg gcc cca ggc cgc | 660 | | |
| 77 | Asp Thr Asn His Arg Gly Pro Thr Ser Trp Leu Ala Pro Gly Arg | | | |
| 78 | 145 150 155 | | | |
| 80 | gcc aag acc ttc cgc ctg aag ctg ccc gcg ctg ctg gcg ctg acg gcc | 708 | | |
| 81 | Ala Lys Thr Phe Arg Leu Lys Leu Pro Ala Leu Leu Ala Leu Thr Ala | | | |
| 82 | 160 165 170 175 | | | |
| 84 | cgg gag tcg tcg gtg cgg tcg ggc ggc gcg ggc ggc gcg ggc gcc ccg | 756 | | |
| 85 | Arg Glu Ser Ser Val Arg Ser Gly Gly Ala Gly Gly Ala Gly Ala Pro | | | |
| 86 | 180 185 190 | | | |
| 88 | ggg gcc gtg gtg gtg gac gtg gac ctg acg ccc gcg gca ccc agc agc | 804 | | |
| 89 | Gly Ala Val Val Val Asp Val Asp Leu Thr Pro Ala Ala Pro Ser Ser | | | |
| 90 | 195 200 205 | | | |
| 92 | gag tcg ctg gcc ctg gac gaa gtg aca gcc atg gac aac cac gtg gca | 852 | | |
| 93 | Glu Ser Leu Ala Leu Asp Glu Val Thr Ala Met Asp Asn His Val Ala | | | |
| 94 | 210 215 220 | | | |
| 96 | ggg ctc ggg ccc gcg gag gag cgg cgt gcg ctg gtg ggt ccc ggc tct | 900 | | |
| 97 | Gly Leu Gly Pro Ala Glu Glu Arg Arg Ala Leu Val Gly Pro Gly Ser | | | |
| 98 | 225 230 235 | | | |
| 100 | ccg ccc cgc agc gcg ccc ggc cag ctc cca tcg ccc cgg gcg cac agc | 948 | | |
| 101 | Pro Pro Arg Ser Ala Pro Gly Gln Leu Pro Ser Pro Arg Ala His Ser | | | |
| 102 | 240 245 250 255 | | | |
| 104 | ctc aac ccc gac gcc tcg ggc tcc agc tgc agc ctg gcc cgg acg cgc | 996 | | |
| 105 | Leu Asn Pro Asp Ala Ser Gly Ser Ser Cys Ser Leu Ala Arg Thr Arg | | | |
| 106 | 260 265 270 | | | |
| 108 | tcc cga gaa agc tgc gcc agc gtg cgc cgc gcc tcg tcg gcc gac gac | 1044 | | |
| 109 | Ser Arg Glu Ser Cys Ala Ser Val Arg Arg Ala Ser Ser Ala Asp Asp | | | |
| 110 | 275 280 285 | | | |
| 112 | atc gag gcc atg cgc gcc ggg gtg ctg ccc ccg cca ccg cgc cac gcc | 1092 | | |
| 113 | Ile Glu Ala Met Arg Ala Gly Val Leu Pro Pro Pro Pro Arg His Ala | | | |
| 114 | 290 295 300 | | | |
| 116 | agc acc ggg gcc atg cac cca ctg cgc agc ggc ttg ctc aac tcc acc | 1140 | | |
| 117 | Ser Thr Gly Ala Met His Pro Leu Arg Ser Gly Leu Leu Asn Ser Thr | | | |
| 118 | 305 310 315 | | | |
| 120 | tcg gac tcc gac ctc gtg cgc tac cgc acc att agc aag att ccc caa | 1188 | | |
| 121 | Ser Asp Ser Asp Leu Val Arg Tyr Arg Thr Ile Ser Lys Ile Pro Gln | | | |
| 122 | 320 325 330 335 | | | |
| 124 | atc acc ctc aac ttt gtg gac ctc aag ggc gac ccc ttc ttg gct tcg | 1236 | | |
| 125 | Ile Thr Leu Asn Phe Val Asp Leu Lys Gly Asp Pro Phe Leu Ala Ser | | | |
| 126 | 340 345 350 | | | |
| 128 | ccc acc agt gac cgt gag atc ata gca cct aag ata aag gag cga acc | 1284 | | |
| 129 | Pro Thr Ser Asp Arg Glu Ile Ile Ala Pro Lys Ile Lys Glu Arg Thr | | | |
| 130 | 355 360 365 | | | |

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132 cac aat gtc act gag aag gtc acc cag gtc ctg tcc ctg ggc gcc gac 1332
133 His Asn Val Thr Glu Lys Val Thr Gln Val Leu Ser Leu Gly Ala Asp
134      370      375      380
136 gtg ctg cct gag tac aag ctg cag gca ccg cgc atc cac cgc tgg acc 1380
137 Val Leu Pro Glu Tyr Lys Leu Gln Ala Pro Arg Ile His Arg Trp Thr
138      385      390      395
140 atc ctg cat tac agc ccc ttc aag gcc gtg tgg gac tgg ctc atc ctg 1428
141 Ile Leu His Tyr Ser Pro Phe Lys Ala Val Trp Asp Trp Leu Ile Leu
142 400      405      410      415
144 ctg ctg gtc atc tac acg gct gtc ttc aca ccc tac tgc gct gcc ttc 1476
145 Leu Leu Val Ile Tyr Thr Ala Val Phe Thr Pro Tyr Ser Ala Ala Phe
146      420      425      430
148 ctg ctg aag gag acg gaa gaa ggc ccg cct gct acc gag tgt ggc tac 1524
149 Leu Leu Lys Glu Thr Glu Glu Gly Pro Pro Ala Thr Glu Cys Gly Tyr
150      435      440      445
152 gcc tgc cag ccg ctg gct gtg gtg gac ctc atc gtg gac atc atg ttc 1572
153 Ala Cys Gln Pro Leu Ala Val Val Asp Leu Ile Val Asp Ile Met Phe
154      450      455      460
156 att gtc gac atc ctc atc aac ttc cgc acc acc tac gtc aat gcc aac 1620
157 Ile Val Asp Ile Leu Ile Asn Phe Arg Thr Thr Tyr Val Asn Ala Asn
158      465      470      475
160 gag gag gtg gtc agc cac ccc ggc cgc atc gcc gtc cac tac ttc aag 1668
161 Glu Glu Val Val Ser His Pro Gly Arg Ile Ala Val His Tyr Phe Lys
162 480      485      490      495
164 ggc tgg ttc ctc atc gac atg gtg gcc gcc atc ccc ttc gac ctg ctc 1716
165 Gly Trp Phe Leu Ile Asp Met Val Ala Ala Ile Pro Phe Asp Leu Leu
166      500      505      510
168 atc ttc ggc tct ggc tct gag gag ctg atc ggg ctg ctg aag act gcg 1764
169 Ile Phe Gly Ser Gly Ser Glu Glu Leu Ile Gly Leu Leu Lys Thr Ala
170      515      520      525
172 cgg ctg ctg cgg ctg gtg cgc gtg gcg cgg aag ctg gat cgc tac tca 1812
173 Arg Leu Leu Arg Leu Val Arg Val Ala Arg Lys Leu Asp Arg Tyr Ser
174      530      535      540
176 gag tac ggc gcg gcc gtg ctg ttc ttg ctc atg tgc acc ttt gcg ctc 1860
177 Glu Tyr Gly Ala Ala Val Leu Phe Leu Leu Met Cys Thr Phe Ala Leu
178      545      550      555
180 atc gcg cac tgg cta gcc tgc atc tgg tac gcc atc ggc aac atg gag 1908
181 Ile Ala His Trp Leu Ala Cys Ile Trp Tyr Ala Ile Gly Asn Met Glu
182 560      565      570      575
184 cag cca cac atg gac tca cgc atc ggc tgg ctg cac aac ctg ggc gac 1956
185 Gln Pro His Met Asp Ser Arg Ile Gly Trp Leu His Asn Leu Gly Asp
186      580      585      590
188 cag ata ggc aaa ccc tac aac agc agc ggc ctg ggc ggc ccc tcc atc 2004
189 Gln Ile Gly Lys Pro Tyr Asn Ser Ser Gly Leu Gly Gly Pro Ser Ile
190      595      600      605
192 aag gac aag tat gtg acg gcg ctc tac ttc acc ttc agc agc ctc acc 2052
193 Lys Asp Lys Tyr Val Thr Ala Leu Tyr Phe Thr Phe Ser Ser Leu Thr
194      610      615      620
196 agt gtg ggc ttc ggc aac gtc tct ccc aac acc aac tca gag aag atc 2100

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| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 197 | Ser | Val | Gly | Phe | Gly | Asn | Val | Ser | Pro | Asn | Thr | Asn | Ser | Glu | Lys | Ile | |
| 198 | | 625 | | | | | 630 | | | | | 635 | | | | | |
| 200 | ttc | tcc | atc | tgc | gtc | atg | ctc | att | ggc | tcc | ctc | atg | tat | gct | agc | atc | 2148 |
| 201 | Phe | Ser | Ile | Cys | Val | Met | Leu | Ile | Gly | Ser | Leu | Met | Tyr | Ala | Ser | Ile | |
| 202 | 640 | | | | | 645 | | | | | 650 | | | | | 655 | |
| 204 | ttc | ggc | aac | gtg | tgc | gcc | atc | atc | cag | cgg | ctg | tac | tcg | ggc | aca | gcc | 2196 |
| 205 | Phe | Gly | Asn | Val | Ser | Ala | Ile | Ile | Gln | Arg | Leu | Tyr | Ser | Gly | Thr | Ala | |
| 206 | | | | | 660 | | | | | 665 | | | | | | 670 | |
| 208 | cgc | tac | cac | aca | cag | atg | ctg | cgg | gtg | cgg | gag | ttc | atc | cgc | ttc | cac | 2244 |
| 209 | Arg | Tyr | His | Thr | Gln | Met | Leu | Arg | Val | Arg | Glu | Phe | Ile | Arg | Phe | His | |
| 210 | | | | 675 | | | | | 680 | | | | | 685 | | | |
| 212 | cag | atc | ccc | aat | ccc | ctg | cgc | cag | cgc | ctc | gag | gag | tac | ttc | cag | cac | 2292 |
| 213 | Gln | Ile | Pro | Asn | Pro | Leu | Arg | Gln | Arg | Leu | Glu | Glu | Tyr | Phe | Gln | His | |
| 214 | | | 690 | | | | | 695 | | | | | 700 | | | | |
| 216 | gcc | tgg | tcc | tac | acc | aac | ggc | atc | gac | atg | aac | gcg | gtg | ctg | aag | ggc | 2340 |
| 217 | Ala | Trp | Ser | Tyr | Thr | Asn | Gly | Ile | Asp | Met | Asn | Ala | Val | Leu | Lys | Gly | |
| 218 | | 705 | | | | 710 | | | | | 715 | | | | | | |
| 220 | ttc | cct | gag | tgc | ctg | cag | gct | gac | atc | tgc | ctg | cac | ctg | aac | cgc | tca | 2388 |
| 221 | Phe | Pro | Glu | Cys | Leu | Gln | Ala | Asp | Ile | Cys | Leu | His | Leu | Asn | Arg | Ser | |
| 222 | 720 | | | | | 725 | | | | | 730 | | | | 735 | | |
| 224 | ctg | ctg | cag | cac | tgc | aaa | ccc | ttc | cga | ggg | gcc | acc | aag | ggc | tgc | ctt | 2436 |
| 225 | Leu | Leu | Gln | His | Cys | Lys | Pro | Phe | Arg | Gly | Ala | Thr | Lys | Gly | Cys | Leu | |
| 226 | | | | 740 | | | | | 745 | | | | | 750 | | | |
| 228 | cgg | gcc | ctg | gcc | atg | aag | ttc | aag | acc | aca | cat | gca | ccg | cca | ggg | gac | 2484 |
| 229 | Arg | Ala | Leu | Ala | Met | Lys | Phe | Lys | Thr | Thr | His | Ala | Pro | Pro | Gly | Asp | |
| 230 | | | | 755 | | | | | 760 | | | | | 765 | | | |
| 232 | aca | ctg | gtg | cat | gct | ggg | gac | ctg | ctc | acc | gcc | ctg | tac | ttc | atc | tcc | 2532 |
| 233 | Thr | Leu | Val | His | Ala | Gly | Asp | Leu | Leu | Thr | Ala | Leu | Tyr | Phe | Ile | Ser | |
| 234 | | | 770 | | | | | 775 | | | | | 780 | | | | |
| 236 | cgg | ggc | tcc | atc | gag | atc | ctg | cgg | ggc | gac | gtc | gtc | gtg | gcc | atc | ctg | 2580 |
| 237 | Arg | Gly | Ser | Ile | Glu | Ile | Leu | Arg | Gly | Asp | Val | Val | Val | Ala | Ile | Leu | |
| 238 | | 785 | | | | 790 | | | | | 795 | | | | | | |
| 240 | ggg | aag | aat | gac | atc | ttt | ggg | gag | cct | ctg | aac | ctg | tat | gca | agg | cct | 2628 |
| 241 | Gly | Lys | Asn | Asp | Ile | Phe | Gly | Glu | Pro | Leu | Asn | Leu | Tyr | Ala | Arg | Pro | |
| 242 | 800 | | | | | 805 | | | | | 810 | | | | 815 | | |
| 244 | ggc | aag | tcg | aac | ggg | gat | gtg | cgg | gcc | ctc | acc | tac | tgt | gac | cta | cac | 2676 |
| 245 | Gly | Lys | Ser | Asn | Gly | Asp | Val | Arg | Ala | Leu | Thr | Tyr | Cys | Asp | Leu | His | |
| 246 | | | | 820 | | | | | 825 | | | | | 830 | | | |
| 248 | aag | atc | cat | cgg | gac | gac | ctg | ctg | gag | gtg | ctg | gac | atg | tac | cct | gag | 2724 |
| 249 | Lys | Ile | His | Arg | Asp | Asp | Leu | Leu | Glu | Val | Leu | Asp | Met | Tyr | Pro | Glu | |
| 250 | | | | 835 | | | | | 840 | | | | | 845 | | | |
| 252 | ttc | tcc | gac | cac | ttc | tgg | tcc | agc | ctg | gag | atc | acc | ttc | aac | ctg | cga | 2772 |
| 253 | Phe | Ser | Asp | His | Phe | Trp | Ser | Ser | Leu | Glu | Ile | Thr | Phe | Asn | Leu | Arg | |
| 254 | | | 850 | | | | | 855 | | | | | 860 | | | | |
| 256 | gat | acc | aac | atg | atc | ccg | ggc | tcc | ccc | ggc | agt | acg | gag | tta | gag | ggc | 2820 |
| 257 | Asp | Thr | Asn | Met | Ile | Pro | Gly | Ser | Pro | Gly | Ser | Thr | Glu | Leu | Glu | Gly | |
| 258 | | 865 | | | | 870 | | | | | 875 | | | | | | |
| 260 | ggc | ttc | agt | cgg | caa | cgc | aag | cgc | aag | ttg | tcc | ttc | cgc | agg | cgc | acg | 2868 |
| 261 | Gly | Phe | Ser | Arg | Gln | Arg | Lys | Arg | Lys | Leu | Ser | Phe | Arg | Arg | Arg | Thr | |

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| | | | | | | | | |
|-----|---|------|------|--|------|--|------|--|
| 262 | 880 | | 885 | | 890 | | 895 | |
| 264 | gac aag gac acg gag cag cca ggg gag gtg tgc gcc ttg ggg ccg ggc | 2916 | | | | | | |
| 265 | Asp Lys Asp Thr Glu Gln Pro Gly Glu Val Ser Ala Leu Gly Pro Gly | | | | | | | |
| 266 | | | 900 | | 905 | | 910 | |
| 268 | cgg gcg ggg gca ggg ccg agt agc cgg ggc cgg ccg ggg ggg ccg tgg | 2964 | | | | | | |
| 269 | Arg Ala Gly Ala Gly Pro Ser Ser Arg Gly Arg Pro Gly Gly Pro Trp | | | | | | | |
| 270 | | | 915 | | 920 | | 925 | |
| 272 | ggg gag agc ccg tcc agt ggc ccc tcc agc cct gag agc agt gag gat | 3012 | | | | | | |
| 273 | Gly Glu Ser Pro Ser Ser Gly Pro Ser Ser Pro Glu Ser Ser Glu Asp | | | | | | | |
| 274 | | | 930 | | 935 | | 940 | |
| 276 | gag ggc cca ggc cgc agc tcc agc ccc ctc cgc ctg gtg ccc ttc tcc | 3060 | | | | | | |
| 277 | Glu Gly Pro Gly Arg Ser Ser Ser Pro Leu Arg Leu Val Pro Phe Ser | | | | | | | |
| 278 | | | 945 | | 950 | | 955 | |
| 280 | agc ccc agg ccc ccc gga gag ccg ccg ggt ggg gag ccc ctg atg gag | 3108 | | | | | | |
| 281 | Ser Pro Arg Pro Pro Gly Glu Pro Pro Gly Gly Glu Pro Leu Met Glu | | | | | | | |
| 282 | 960 | | 965 | | 970 | | 975 | |
| 284 | gac tgc gag aag agc agc gac act tgc aac ccc ctg tca ggc gcc ttc | 3156 | | | | | | |
| 285 | Asp Cys Glu Lys Ser Ser Asp Thr Cys Asn Pro Leu Ser Gly Ala Phe | | | | | | | |
| 286 | | | 980 | | 985 | | 990 | |
| 288 | tca gga gtg tcc aac att ttc agc ttc tgg ggg gac agt cgg ggc cgc | 3204 | | | | | | |
| 289 | Ser Gly Val Ser Asn Ile Phe Ser Phe Trp Gly Asp Ser Arg Gly Arg | | | | | | | |
| 290 | | | 995 | | 1000 | | 1005 | |
| 292 | cag tac cag gag ctc cct cga tgc ccc gcc ccc acc ccc agc ctc | 3249 | | | | | | |
| 293 | Gln Tyr Gln Glu Leu Pro Arg Cys Pro Ala Pro Thr Pro Ser Leu | | | | | | | |
| 294 | | | 1010 | | 1015 | | 1020 | |
| 296 | ctc aac atc ccc ctc tcc agc ccg ggt cgg cgg ccc cgg ggc gac | 3294 | | | | | | |
| 297 | Leu Asn Ile Pro Leu Ser Ser Pro Gly Arg Arg Pro Arg Gly Asp | | | | | | | |
| 298 | | | 1025 | | 1030 | | 1035 | |
| 300 | gtg gag agc agg ctg gat gcc ctc cag cgc cag ctc aac agg ctg | 3339 | | | | | | |
| 301 | Val Glu Ser Arg Leu Asp Ala Leu Gln Arg Gln Leu Asn Arg Leu | | | | | | | |
| 302 | | | 1040 | | 1045 | | 1050 | |
| 304 | gag acc cgg ctg agt gca gac atg gcc act gtc ctg cag ctg cta | 3384 | | | | | | |
| 305 | Glu Thr Arg Leu Ser Ala Asp Met Ala Thr Val Leu Gln Leu Leu | | | | | | | |
| 306 | | | 1055 | | 1060 | | 1065 | |
| 308 | cag agg cag atg acg ctg gtc ccg ccc gcc tac agt gct gtg acc | 3429 | | | | | | |
| 309 | Gln Arg Gln Met Thr Leu Val Pro Pro Ala Tyr Ser Ala Val Thr | | | | | | | |
| 310 | | | 1070 | | 1075 | | 1080 | |
| 312 | acc ccg ggg cct ggc ccc act tcc aca tcc ccg ctg ttg ccc gtc | 3474 | | | | | | |
| 313 | Thr Pro Gly Pro Gly Pro Thr Ser Thr Ser Pro Leu Leu Pro Val | | | | | | | |
| 314 | | | 1085 | | 1090 | | 1095 | |
| 316 | agc ccc ctc ccc acc ctc acc ttg gac tgc ctt tct cag gtt tcc | 3519 | | | | | | |
| 317 | Ser Pro Leu Pro Thr Leu Thr Leu Asp Ser Leu Ser Gln Val Ser | | | | | | | |
| 318 | | | 1100 | | 1105 | | 1110 | |
| 320 | cag ttc atg gcg tgt gag gag ctg ccc ccg ggg gcc cca gag ctt | 3564 | | | | | | |
| 321 | Gln Phe Met Ala Cys Glu Glu Leu Pro Pro Gly Ala Pro Glu Leu | | | | | | | |
| 322 | | | 1115 | | 1120 | | 1125 | |
| 324 | ccc caa gaa ggc ccc aca cga cgc ctc tcc cta ccg ggc cag ctg | 3609 | | | | | | |
| 325 | Pro Gln Glu Gly Pro Thr Arg Arg Leu Ser Leu Pro Gly Gln Leu | | | | | | | |
| 326 | | | 1130 | | 1135 | | 1140 | |

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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12

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